day the deglutition was very perceptible. Of this advantage was taken, and under the eye of a most careful female relative from three to four drops of the wine were given during every six hours, in as much of the mixture as the infant was found able to swallow.

On the seventh day the child was weighed and found, including a small flannel roller, to be *twenty-four* ounces. The roller was under one ounce in weight. At this period the length of the child was not taken, but was supposed to be from twelve to thirteen inches. As the feelings of the mother were most acute, and as, indeed, she was considered to be in a dying state, and as it was not expected that the infant could suck, an occasional wet-nurse was not got till the ninth day; the other nourishment being supplemented nearly as above. At first the nurse merely milked a proportion into the mouth, but in less than eight days it was found that the child could draw a little, which gradually improved. Occasionally a small portion of magnesia usta or castor oil was given, so as to ensure regularity in the bowels. About the end of the third week very fine oatmeal gruel, sweetened with sugar, was alternated with the cream and water, the quantity of wine being gradually increased; and latterly the quantity given during twenty-four hours has been from one to one and a half teaspoonful.

On 16th of May the child was baptized by the Rev. James Thornton, of Milnathort, and was then observed to cry lustily for an infant of such tiny proportions. When six weeks and one day old, the weight was accurately ascertained to be *thirty-nine* ounces; the length, as nearly as a tape applied to the child would enable, showed *sixteen and a half* inches; and on the 30th of May the weight was *forty three* ounces, having gained four ounces since last weighing. At the last period the circumference, by the forehead and occiput, was barely *eleven and a half* inches.

During the last four weeks the child has been regularly bathed in water, at first tepid, but latterly of the temperature of from 65° to 70° of Fahrenheit; and occasionally, according to the testimony of the very careful female relative, who has hitherto so creditably and successfully superintended the nursing, sometimes considerably lower; and the infant is described as uniformly enlivened and strengthened after the bath. The stomach, it is remarkable, has never once given way; and this must be solely attributed to the extreme care observed in regulating the proportions of nourishment, whether by the breast or by the spoon; and it has been remarked that the little creature seems uncommonly happy after her doses of wine and gruel. When lifted for necessary purposes, she does not fail to testify by her crying the sense she entertains of the annoyance.

Of the exact period of utero gestation when the infant was born it is not, perhaps, possible to speak with absolute certainty; but, taking the whole circumstances together, it does not seem unreasonable, Mr. A. thinks, to fix the period as somewhere betwixt the end of the sixth and middle of the seventh month; and certainly interesting, more especially in a practical point of view.

MISCELLANEOUS.

96. *Remarks on Endosmose.* By Ph. Jolly.—This paper enters into a very full consideration of the whole subject of endosmose, and commences with a criticism of the methods hitherto employed for its measurement, in which the author shows that the indications of Dutrochet's Endosmometer are imperfect, and liable to be affected by a variety of different errors. In order to avoid these, the author has contrived a new method of measuring the amount of endosmose. For this purpose he employs a small tube from about three-fourths of an inch to an inch in diameter, over the one end of which a piece of pig's bladder is tightly tied. The bladder is then introduced for some time into spirit of wine, by which treatment it is enabled to resist putrefaction for a longer time than it does when unprepared. The substance whose diffusion is to be measured, is then brought into the tube either in a dry state or in solution, in a known quantity of water, the whole is then weighed, and the covered end of the tube inserted about a line under the surface of water, in a vessel containing about four pints; the water in which is frequently

changed during the course of the experiment. The tube is then weighed at definite intervals, and the weight is found to increase, at first rapidly, and afterwards more and more slowly, until at length, in place of increasing, a slight diminution begins to make its appearance. The experiment is then at an end: the whole of the substance introduced into the tube has disappeared, and nothing but water remains. The small diminution noticed at the end still continues, and is proved by the author to depend upon evaporation from the surface, the amount of which is determined in each experiment by the loss of weight in a tube of exactly similar form containing water only. The experiments have shown that this complete diffusion of different substances takes place in very different time, the gain in weight being with some at an end in a few hours, while with others it goes on increasing during several days. It is further proved that the weight of water which, so to speak, replaces the different substances is constant, especially if the same piece of bladder has been employed, whether the substance has been employed in the dry state or in solution in different amounts of water. The quantity of water which replaces a unit of the diffused substance, the author calls the endosmotic equivalent, and the following table contains the results of his experiments. The number placed before each, refers to the piece of bladder employed in the experiment.

	Endosmotic Equivalent.		Endosmotic Equivalent.
1. Common Salt - -	4·316	5. Sulphate of Magnesia	11·503
1. " - -	4·58	6. " - -	11·802
2. " - -	3·991	6. Sulphate of Copper -	9·564
2. " - -	3·820	9. Bisulphate of Potash -	2·345
10. " - -	4·352	3. Sulphuric Acid - -	0·391
11. " - -	4·092	5. " - -	0·308
5. Sulphate of Soda - -	12·44	7. Hydrate of Potass -	200·09
7. " - -	12·023	1. " - -	231·4
7. " - -	11·033	6. Alcohol - -	4·140
6. " - -	11·066	8. " - -	4·132
1. " - -	11·581	4. " - -	4·336
1. Sulphate of Potass -	11·42	6. Sugar - -	7·250
2. " - -	12·65	7. " - -	7·064
4. " - -	12·76	5. Gum - -	11·79(?)

The author also gives a series of experiments from which he draws the conclusion, that the quantity of any substance passing through a membrane in a unit of time is proportional to the density of the fluid. Some observations are also made which tend to show that the endosmotic equivalent increases with the temperature, at least this is generally the case, though common salt appears to be an exception to the rule. The paper concludes with a discussion of the physical cause of endosmose, for which we refer our readers to the original.—*Monthly Retrospect*, Sept. 1848, from *Henle und Pfeufer's Zeitschrift für Rationelle Medizin*, Vol. 7.

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97. *State of Medical Education in Turkey.*—[We are indebted to a medical gentleman, at present residing in Constantinople, for the following details. They point to the existence of a state of matters of which very imperfect accounts have as yet reached this country; and such as, undoubtedly, is at once the proof and the earnest of a new era in the history of civilization having begun in the East.]

"Military hospitals, on a large scale, are either built or a-building in every quarter of the Turkish empire. There are about one thousand European surgeons attached to the different regiments, two hundred of whom are Jews. The chief professor of the Medical College, Dr. Spitzer, is a Jew. He is also one of the physicians in ordinary to the Sultan. By him I was introduced to H. E. the Hakim Bashy Ismael Effendi, the chief physician of the Ottoman empire, who kindly permitted me to visit the different lecture-rooms in the Medical College. It is certainly in a very flourishing condition, considering that it has been in existence only eleven years. The pupils are brought, by order of the Sultan, from all departments of the empire, and are lodged, fed, clothed, and educated, at the expense of the government. When qualified as physicians and surgeons, they